



U.S. Department  
of Transportation

Research and  
Special Programs  
Administration

400 Seventh Street, S.W.  
Washington, D.C. 20590

NOV 12 2004

DOT-E 8650  
(TWELFTH REVISION)

EXPIRATION DATE: May 31, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Ethyl Corporation  
Richmond, VA

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of certain materials listed in paragraph 6 below in non-DOT specification steel portable tanks. This exemption provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.242(c), 173.243(c), 173.244(c) and 174.63(c)(1) in that non-DOT specification portable tanks specified are not authorized, except as specified herein.

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5. BASIS: This exemption is based on the application of Ethyl Corporation dated October 24, 2003, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Flammable liquids, n.o.s. (contains petroleum distillates)	3	UN1993	III
Flammable liquids, toxic, n.o.s. (xylene; methylcyclopentadienyl manganese tricarbonyl)	3	UN1992	III
Metal carbonyls, n.o.s. (Methylcyclopentadienyl manganese tricarbonyl)	6.1	UN3281	II
Motor fuel anti-knock mixtures	6.1	UN1649	I

7. SAFETY CONTROL MEASURES: Prescribed packaging is a non-DOT specification portable tank, mounted in ISO frame, designed and constructed in accordance with Westerwalder Eisenwerk drawings CS-529/0 Rev. A dated June 23, 1980, CS-529/3 Rev. A, other drawings, calculations and technical specifications on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA) dated after June 26, 1980.
- a. Code - Designed to ASME but not marked and otherwise conforms to DOT Specification 51 but not so marked.
  - b. Insulation - none
  - c. Water Capacity (U.S. Gallons) - 2,890
  - d. Material - West German fine grain carbon steel St E 36 equivalent to ASTM A516 grade 70

(outside dia) x (length) x (thickness)

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e. Tank Size  
(inches) - 62.99 232.28 0.3937

Head Thickness - 0.3937

Weld Joint Efficiency - 1.0

f. Design Pressure (PSIG) - 100

Note: Design pressure means "maximum allowable working pressure (MAWP)" as used in the ASME Code.

g. Test Pressure, Minimum (PSIG) - 150

h. Openings - One (1) 20-inch diameter manhole containing filling and discharge connection, vent connection, safety valve connection, fusible element connection and a blank flange on top; no bottom outlets.

i. Tank surface area (square feet) - 334

j. Safety relief devices:

(1) One (1) 1.0-inch diameter spring loaded safety relief valve in series with and outboard of a rupture disc both set at 100 psig with a relief capacity of 92,760 SCFH and one (1) 2.0-inch diameter fusible element with a fusing temperature of 250°F and a relief capacity of 235,638 SCFH. Total relief capacity is 328,938 SCFH; or

(2) One (1) 1.5-inch diameter spring loaded safety relief valve in series with and outboard of a rupture disc both set at 100 psig with a relief capacity of 144,240 SCFH.

k. G-Loadings Vertical down 2; Vertical up 2; Longitudinal 3.5; and Transverse 1.5.

l. Maximum Gross Weight (pounds) - 55,000

m. Maximum Commodity Weight (pounds) - 43,540

n. Tare Weight, nominal (pounds) - 11,460

o. Design Specific Gravity - 1.58

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8. SPECIAL PROVISIONS:

- a. Each portable tank must be plainly marked on both sides near the middle, in letters at least two inches high on a contrasting background, "DOT-E 8650".
- b. Hydrostatic test certificates for each tank must be kept on file by the manufacturer or owner at its principal business office and be made available to a DOT representative upon request.
- c. No product may be shipped that has venting requirements exceeding the capacity of the installed safety relief devices, or has a specific gravity greater than 1.97. The venting capacity required for each product must be determined by the flow formulas contained in Compressed Gas Association (CGA) pamphlet S-1.2.
- d. Each portable tank must be marked with the appropriate proper shipping name listed in paragraph 6 of this exemption.
- e. The tank must be filled so as not to be liquid full at less than or equal to 130°F.
- f. Each tank must be (i) visually inspected prior to each trip to ensure that it has not been damaged on the previous trip; (ii) visually inspected at least once every 2-1/2 years as prescribed for IM 101 portable tanks in § 180.605(d), except that an internal inspection is not required; (iii) reinspected once every five years in accordance with § 180.605(e), as prescribed for a DOT Specification 51 portable tank, except an internal inspection is not required provided an ultrasonic thickness test is performed; and (iv) retested once every five years in accordance with § 180.605(e) as prescribed for a DOT Specification 51 portable tank. Ultrasonic thickness testing used as an alternative to an internal inspection must be performed in conformance with applicable procedures specified for thickness testing of cargo tanks as set forth in § 180.407(i).
- g. Portable tanks may not be transported in trailer on flatcar (TOFC) service except under conditions approved by the Associate Administrator for Safety, Federal Railroad Administration (FRA). Portable tanks may be transported in container-on-flatcar (COFC) service only under the following conditions:

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(1) Portable tanks must be equipped to be securely attached to a railcar equipped with an ISO standard COFC basic pedestal system designed for container support and securement;

(2) Each railcar used to transport portable tanks must be equipped with a cushioning system that meets the requirements of the Association of American Railroads Specification M-952-82; and

(3) Shipments made under this exemption must be in accordance with § 174.84.

h. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this exemption and the HMR.

i. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

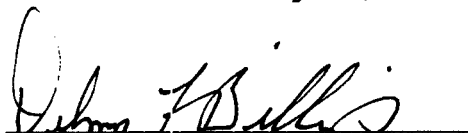
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and motor vehicle used to transport packages covered by this exemption.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq.:
  - o All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
  - o Persons operating under the terms of this exemption must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
  - o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when the exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety

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Date

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.  
Attention: DHM-31.

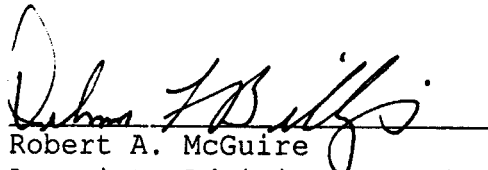
Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at <http://hazmat.dot.gov/exemptions> Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: PTO/AM/sln

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The following are hereby granted party status to this exemption based on their application(s) submitted in accordance with § 107.107 or § 107.109, as appropriate:

Company Name City/State	Application Date	Issue Date	Expiration Date
Afton Chemical Corporation Richmond, VA	Jun 7, 2004	Jun 30, 2004	May 31, 2006

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Robert A. McGuire  
Associate Administrator for  
Hazardous Materials Safety